Mental addition and subtraction

Perform mental calculations including large numbers

Challenge 1

1 Work out these calculations mentally.

a. 186 430 + 40 000
b. 271 538 – 4200
c. 372 300 – 600
d. 521 642 + 300 000
e. 762 518 + 7000
f. 487 286 – 11 000
g. 629 360 + 800
h. 400 763 – 12 000
i. 840 229 – 500 000
j. 377 224 + 8500

2 Adding or subtracting a multiple of 10, 100 or even 1000 is not difficult. What types of addition and subtraction calculations do you find difficult to calculate mentally and need to use a formal written method for? Include in your explanation some examples of these types of calculations.

Challenges 2, 3

1 Work out these calculations mentally.

a. 2 670 000
 i. + 500 000
 ii. + 7000
 iii. – 34 000
 iv. – 300 000

b. 4 350 800
 i. + 54 000
 ii. + 6000
 iii. – 400 000
 iv. – 3000

c. 5 714 000
 i. + 700 000
 ii. + 8000
 iii. – 5000
 iv. – 400

d. 3 157 800
 i. + 900
 ii. +63 000
 iii. – 38 000
 iv. – 400 000

e. 7 000 000
 i. + 175 000
 ii. + 38 000
 iii. – 23 000
 iv. – 300

f. 4 390 822
 i. + 500
 ii. + 600 000
 iii. – 56 000
 iv. – 700 000

2 Play these two games with a partner.

More than 1 000 000

- Both write down the number 10 000. This is your start number.
- Take turns to spin the spinner and roll the dice.
- Each time, put the two together to make a number. So, if you roll a 2 and spin 'ten thousands', then your number would be 20 000.
- Add your number to the start number.
- Continue until one player's number is greater than 1 000 000. This player is the winner.

Less than 10 000

- Begin with a start number of 1 000 000.
- Play the game as described above, but this time subtract the number you make using the dice and the spinner.
- The winner is the first player whose number is less than 10 000.

You will need:
- Resource 78: Place value spinner
- pencil and paper clip – for the spinner
- 1–6 dice

Challenge 3

Develop a different version of the games in Challenges 2, 3 that involves addition and subtraction.

- What will the target number be?
- What will the start number be?
- What kind of dice will you use?
- Will you want a different type of spinner?

I am going to include an unlucky number. If you roll it you miss a turn!